

U.S.C. § 103(a) as being unpatentable over CH000414118 in view of U.S. Patent No. 3,716,959 to Bernardi, as applied to the rejection of claim 1 above, and in further view of U.S. Patent No. 5,956,919 to McCracken. Applicant respectfully submits that these grounds of rejection have been overcome in light of the following remarks, and respectfully requests that the Examiner reconsider the present application in light of the same.

In rejecting Claims 1, 4, 5, 6, 7, 8, 9, 10, and 11 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-10 of U.S. Patent No. 5,956,919 issued to McCracken ("the '919 patent"), the Examiner determined that the '919 patent and the claims of the instant application, while not

identical, are not patentably distinct from each other because end plates are old and very well known in the art for their use in providing a means for interconnecting adjacent beam members. In distinguishing his improved beam member from his earlier patented beam member, McCracken identifies the thrust of his invention in the present application as "achiev[ing] a full moment connection between the end plate 52 and the flange 54."

[McCracken, Page 9, Lines 8-9]. To accomplish the full moment connection, "end plate 52[,] rests on the ledge formed by recessed free end portions 56, 64 such that the recess 66 extends to a depth to receive one-half the thickness of the end plate 52." [McCracken, Page 8, Lines 14-16]. The '919 patent teaches a beam member, but without the improvements disclosed in the instant application, namely, an improved beam member providing a recessed end plate capable of achieving a full moment connection.

Accordingly, the invention in the '919 patent is limited to a beam member without the recessed end plate and the end portion construction provided to accomplish the full

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② not claimed

③ not claimed in claim 1 but is claimed in claim 11

moment connection as disclosed in the instant application. As such, the '919 patent does not disclose or teach an improved beam member having the recessed end plate structure required to accomplish a full moment connection in treatments where beam members are connected longitudinally.

(4)
not chosen
in claim 1

①
not chosen

The present claimed invention, by contrast, claims a beam member having an end plate for improving the overall structural integrity of the beam, as well as providing for a full moment interconnection of more than one beam. As is seen in Figures 12a, 12b, and 13 of the instant application, Applicant's invention comprises free end portions 56, 64 of flange 54 in a recessed arrangement from the top of leg sections 58, 62. Clearly, the '919 patent and its free end portions 26 and 28 of the leg sections 22 and 24, respectively, turned toward each other so that the flanges 12 and 14 are generally C-shaped in transverse cross-section [the '919 patent, Column 2, Lines 47-50; Figure 6], does not teach or suggest the recited article directed to free end portions 56, 64 of flange 54 and their abbreviated extension to leg sections 58, 62, thereby creating a recess and shelf for receiving an end plate [McCracken, Page 8, Lines 9-13; Figures 12a, 12b]. Whereas the beam member taught by the '919 patent does provide a beam member having a pair of opposing C-shaped flanges and a corrugated web, the '919 patent does not teach or suggest non-fully extended free end portions which create a recess and shelf for receiving a recessed end plate [McCracken, Page 8, Lines 14-21; Figures 12a, 12b]. Accordingly, the '919 patent cannot support a rejection of the present invention under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-10 of the '919 patent and Applicant respectfully requests withdrawal of the rejections based on the same.

The Court of Appeals for the Federal Circuit (“CAFC”) and its predecessor court have had numerous opportunities to interpret and apply the judicially created doctrine of obviousness-type double patenting. Issues relating to the interpretation and application of the doctrine are resolved by applying the precedent established and adopted by the CAFC. In terms of identifying what the doctrine is, the court has stated that, “[t]he determining factor in deciding whether or not there is double patenting is the existence or non-existence of *patentable difference* between two sets of claims.” *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 23 U.S.P.Q.2d 1839, 1844 (Fed. Cir. 1992) (summarizing *In re Borah*, 148 USPQ 213 (CCPA 1966)). In terms of identifying what a patentable difference is, the court has stated that, “patentably distinguishable, patentable distinctions, and whether such differences would have been obvious to one skilled in the art . . . are all equivalent” in making a determination when comparing two sets of claims. *Id.* What is claimed is that which is “defined by the claim taken as a whole, every claim limitation being material.” *General Foods*, 23 U.S.P.Q.2d at 1845. In other words, the determination hinges upon the following question: “Does any claim in the application define merely an obvious variation of an invention disclosed and claimed in the patent?” *Ex parte Nesbit*, 25 USPQ2d 1817, 1824 (Fed. Cir. 1992) (citing *In re Vogel*, 164 USPQ 619 (CCPA 1970)).

By applying the above-stated CAFC rules for determining whether a double-patenting rejection will withstand judicial scrutiny, it becomes evident that the ‘919 patent cannot stand as a reference capable of sustaining a double-patenting rejection when applied to the instant application. First, one must look to the claims and determine whether each and every element as set forth in the claims 1, 4, 5, 6, 7, 8, 9, 10, and 11 of

the present application is found in claims 1-10 of the '919 patent, every limitation being material. *General Foods Corp.*, 23 U.S.P.Q.2d at 1844-45. The '919 patent does not claim free end portions of an opposing flange and constructing the same such that a recess is created for receiving an end plate that improves the overall structural integrity of the beam, as well as providing for a longitudinal connection to another beam, and as such, the '919 patent cannot support a rejection of the present invention under the judicially created doctrine of obviousness-type double patenting. *Id.* (Compare Claim 1 of the instant application with claims 1-10 of the '919 patent). With respect to Claim 4 of the instant application, it depends from claim 1, and as such, comprises the same features of Claim 1, in addition to its claimed features of the beam member flange of Claim 1. Likewise, Claims 5, 6, 7, 8, 9, and 10 depend from Claim 1, or a claim depending from Claim 1 such that they comprise the same features of Claim 1. With respect to Claim 11 of the present application, it too includes free end portions of an opposing flange and a construction for the same such that a recess is created for receiving an end plate that improves the overall structural integrity of the beam, as well as providing for a longitudinal connection to another beam. Accordingly, Applicant respectfully requests withdrawal of the rejections of Claims 1, 4, 5, 6, 7, 8, 9, 10, and 11 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-10 the '919 patent. (b)

A comparison of the claims of the instant application and the '919 patent reveals the existence of patentable differences between the two sets of claims, and therefore, the '919 does not support a rejection of the present invention under the judicially created doctrine of obviousness-type double patenting and Applicant respectfully requests

withdrawal of the rejections based on the same. *General Foods Corp.*, 23 U.S.P.Q.2d at 1844-45. Just as in *General Foods*, the inventions of the instant application and the '919 patent are “ . . . patentably distinct . . . inventions . . . capable of being used by [themselves]. The fact that it may be desirable to use both invention in the same commercial [application] does not result, however, in any recognized form of double patenting, or in the 'extension' of either patent.” *Id.* at 1844. By reading each claim as an entirety to determine what invention it defines, one reaches the conclusion that a double patenting rejection cannot stand in the instant case. *Id.* at 1845. Furthermore, no claim in the instant application defines merely an obvious variation of an invention disclosed and claimed in the '919 patent, and as such, a double patenting rejection cannot stand. *Ex parte Nesbit*, 25 USPQ2d 1817 at 1824. Accordingly, Applicant respectfully requests withdrawal of the rejections based on the judicially created doctrine of obviousness-type double patenting.

The Examiner also rejected Claims 1-5 and 8-11 under 35 U.S.C. § 103(a) as being unpatentable over CH000414118 to Vest et al. in view of U.S. Patent No. 3,716,959 to Bernardi. Applicant respectfully disagrees and submits that the combination of the Vest et al. and Bernardi references would necessarily constitute a beam member different from that of Applicant. Furthermore, Vest et al. teach away from the addition of an end plate to provide added structural integrity and a full moment connection between beam members. The Examiner points out in paragraph 4 of her Detailed Action that Vest et al. teach a beam having flanges, a central web section, inwardly extending leg sections, and a convoluted web member having alternating protrusions adjacent to leg sections [Vest et al., Figure 1]. Other than by virtue of a review of Figures 2-14, further

information is difficult to discern from Vest et al. in that its text is in a language other than English, presumably German. Left with nothing else, a review of the remaining figures yields a cursory understanding of the Vest et al. beam members as having a variety of diagonal, wave-like, angular, double-diagonal in parallel, and double mirror image diagonal web members [Vest et al., Figures 3-7].

Figure 8 seemingly illustrates a beam member having parallel flange members. [Vest et al., Figure 8]. However, as the span of the beam increases, its load bearing qualities are stressed to a maximum, such that additional support is supplied by providing a beam member flange in other than a parallel relationship with the flange of the load side of the beam [Vest et al., Figures 9-10]. Interestingly, Vest et al. solution to the provision of beam members of extended lengths is to modify the beam to an arcuate shape, which in turn improves its load bearing characteristics. However, Vest et al. do not disclose or teach through its illustrations a beam member having free end portions of an opposing flange and constructing the same such that a recess and shelf are created for receiving an end plate that improves the overall structural integrity of the beam, as well as providing for full moment longitudinal connection to another beam.

The Examiner next points to Bernardi for the teaching of a plate welded to a beam end. Bernardi further describes the patentable features of his invention by explaining that “the beam (10) is adapted at each end for a semi-rigid connection to columns 12, 14. A semi-rigid connection . . . to the columns . . . permit[s] elongagtion under load . . . to obtain the semi-rigid action [that] permits the beam to flex under loading.” [Bernardi, Column 2, Lines 26-34]. Bernardi also teaches that, “welds (39) are provided between the abutting ends of the web (22), at (41) in the lower flange (18) and at (43) in the

separated flange portion (32)” [Bernardi, Column 2, Lines 46-49]. However, Bernardi does not disclose or teach a beam member having free end portions of an opposing flange and constructing the same such that a recess and shelf are created for receiving an end plate that improves the overall structural integrity of the beam, as well as providing for a longitudinal connection to another beam.

In sharp contrast, the present invention claims a beam member having a recessed end plate secured to the leg sections of opposing flanges and the beam web. The claimed invention claims a beam member having a recessed end plate for improving the overall structural integrity of the beam, as well as providing for a full moment interconnection of more than one beam. As is seen in Figures 12a, 12b, and 13 of the instant application, Applicant’s invention comprises free end portions 56, 64 of flange 54 in a recessed arrangement from the top of leg sections 58, 62. Clearly, Vest et al. disclosure of a variety of internal webbing for beam members does not teach or suggest the recited article directed to a beam member having a recessed end plate secured to the leg sections of opposing flanges and the beam web for improving the overall structural integrity of the beam, as well as providing for a full moment interconnection of more than one beam.

Moreover, unlike the demand moment beam abutting plate adapted for a semi-rigid connection to a pair of columns as taught by Bernardi, the recessed end plate of the present invention is provided for improving the overall structural integrity of the beam, as well as providing for a full moment interconnection of more than one beam [*Compare* Bernardi, Column 1, Lines 8-11; Column 2, Lines 46-49, *with* McCracken, Page 9, Lines 19-22 through Page 10, Lines 1-4; Figures 12a, 12b, and 13]. The present invention “eliminates the need for the overlapping connections and securing collars used in the

prior art.” [McCracken, Page 9, Lines 21-22]. If one were to combine the beam member of Vest et al. with the semi-rigid connection plate of Bernardi, the result would necessarily constitute a beam member vastly different from that of Applicant. There is nothing disclosed in either the Vest et al. reference or the Bernardi reference which would teach or suggest to one skilled in the art the modification of the references suggested by the Examiner. Arguably, the references, whether considered alone, or in combination, teach away from the modifications suggested by the Examiner.

To reject claims in an application under 35 U.S.C. § 103, an Examiner must show an un rebutted *prima facie* case of obviousness. *In re Deuel*, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995). In the absence of a proper *prima facie* showing of obviousness, an Applicant who complies with the statutory requirements of Title 35 is entitled to a patent. *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). “[T]he use of hindsight based on the invention to defeat patentability” is prevented by requiring “the examiner to show a motivation to combine the references that create the case for obviousness.” *In re Rouffet*, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Accordingly, the examiner must provide reasons by which one skilled in the art, if confronted with the same problems as the inventor and without the knowledge of the claimed invention, would combine the elements from the cited prior art for implementation in the manner as claimed by Applicant. *Id.* at 1458. The required motivation must stem from some teaching, suggestion, or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Applicant’s disclosure. *Ex parte Nesbit*, 25 USPQ2d 1817 at 1819.

Thus, if one followed the teaching of Vest et al., he or she would be persuaded not

to even attempt to combine the Vest et al. reference with the Bernardi reference in an effort to arrive at the beam member end plate of Applicant. Vest et al. illustrate the advantages of its webbed beam member with a variety of web constructions [Vest et al., Figures 1-7]. Furthermore, Vest et al. teach that an expanded beam member would require the additional support provided by a beam member having an arcuate lower flange. [Vest et al., Figures 9-10]. Bernardi teaches a semi-rigid plate abuttingly welded to the ends of the web and the flange for connecting beams to vertical columns. [Bernardi, Column 1, Lines 30-33; Column 2, Lines 45-49]. Neither Vest et al. nor Bernardi teach or suggest a beam member having a recessed end plate for improving the overall structural integrity of the beam, as well as providing for a full moment interconnection of more than one beam. The beam of Vest et al. in combination with the semi-rigid connection plate of Bernardi contributes nothing in the way of teaching or suggesting the recessed end plate of Applicant. Furthermore, there is nothing disclosed in either the Vest et al. reference or the Bernardi reference which would teach, suggest, or motivate to one skilled in the art the modification of the references suggested by the Examiner. Arguably, the arcuate lower flange of Vest et al. and the abutted plate for semi-rigid connection of demand moment beams to vertical columns of Bernardi, whether considered alone, or in combination, teach away from the modifications suggested by the Examiner.

Neither of the cited references identify a beam member having a recessed end plate for improving the overall structural integrity of the beam, as well as providing for a full moment interconnection of more than one beam. [McCracken, Page 9, Lines 19-22 through Page 10, Lines 1-4; Figures 12a, 12b, and 13]. Unlike the overlapping

connection or securing collar of Bernardi, the present invention “eliminates the need for the overlapping connections and securing collars used in the prior art.” [McCracken, Page 9, Lines 21-22]. There is nothing disclosed in Vest et al., or Bernardi that would teach, suggest, or motivate one skilled in the art to modify the references suggested by the Examiner. But for the knowledge of Applicant’s beam member having a recessed end plate, gleaned from an understanding of the present application, it is unlikely that the Examiner, or another skilled in the art, would have thought of picking and modifying the demand moment abutted plate of Bernardi and combining it with a modified beam member of Vest et al. to arrive at the present invention. No one skilled in the art, to the extent of the patents cited by the Examiner are concerned, thought of making the combination of the present invention. Based on the foregoing, Applicant respectfully requests that the Examiner withdraw the rejections of Claims 1-5 and 8-11 under 35 U.S.C. § 103(a) as being unpatentable over CH000414118 to Vest et al. in view of U.S. Patent No. 3,716,959 to Bernardi.

The Examiner also rejected Claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over CH000414118 in view of U.S. Patent No. 3,716,959 to Bernardi, as applied to the rejection of claim 1 above, and in further view of the ‘919 patent to McCracken. Applicant respectfully disagrees and submits that the ‘919 patent to McCracken is not prior art as defined by 35 U.S.C. § 103(a). Accordingly, Applicant respectfully requests the withdrawal of the obviousness rejection based on the combination of the Vest et al., Bernardi, and McCracken references.

Section 103(a) states:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the

differences between the subject sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

35 U.S.C. § 103(a) (1999).

Accordingly, one must look to Section 102 to determine what is meant by “invention” in Section 103(a). In the present case, the ‘919 patent is not prior art under 35 U.S.C. § 102(a) because the invention was not known or used by others in this country, or patented, or published in this or a foreign country, before the invention thereof by the Applicant. 35 U.S.C. § 102(a) (1999). The ‘919 patent, issuing on September 28, 1999, is not prior art under 35 U.S.C. § 102(b) because the subject invention was not patented by the Applicant in this or a foreign country or in public use or on sale more than one year prior to the filing date of the present application. 35 U.S.C. § 102(b) (1999). The present application was filed on June 18, 1999, whereas the ‘919 patent issued on September 28, 1999, over three months after the present application’s filing date. Applicant has not abandoned the application, nor has Applicant filed for a foreign patent prior to filing in the United States. 35 U.S.C. §§ 102(c)-(d) (1999). Furthermore, the ‘919 patent is not prior art to the invention of the instant application under Sections 103(e)-(g). 35 U.S.C. §§ 102(e)-(g) (1999). Accordingly, the ‘919 patent is not prior art under Section 102, and therefore, its use in rejecting the claims of the instant application under Section 103(a) cannot be sustained. In view of the foregoing, Applicant respectfully requests the withdrawal of the obviousness rejection based on the combination of the Vest et al., Bernardi, and McCracken references.

Accordingly, the purpose of the claimed invention is not taught nor suggested by

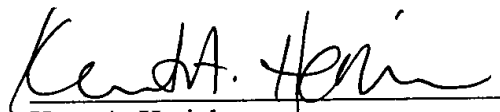
the cited references, nor is there any suggestion or teaching that would motivate one skilled in the relevant art to combine the references in a manner that would meet the purpose of the claimed invention. Because the cited references, whether considered alone, or in combination with one another, do not teach nor suggest the purpose of the claimed invention, Applicant respectfully submits that the claimed invention patentably distinguishes over the prior art, including the art cited merely of record.

Based on the foregoing, Applicant respectfully submits that claims 1-11 are in condition for allowance at this time, patentably distinguishing over the cited prior art. Accordingly, reconsideration of the application and passage to allowance are respectfully solicited.

The Examiner is respectfully urged to call the undersigned attorney at (515) 288-2500 to discuss the claims in an effort to reach a mutual agreement with respect to claim limitations in the present application which will be effective to define the patentable subject matter if the present claims are not deemed to be adequate for this purpose.

Date: 5/4/2001

Respectfully submitted,



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